



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,184	10/13/2005	Masayuki Takeda	200303.00011	5290

21324 7590 10/12/2006

HAHN LOESER & PARKS, LLP
One GOJO Plaza
Suite 300
AKRON, OH 44311-1076

EXAMINER

THOMAS, ERIC W

ART UNIT PAPER NUMBER

2831

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,184

Applicant(s)

TAKEDA ET AL.

Examiner

Eric Thomas

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 3-4 are objected to because of the following informalities:

Claim 3, line 2, the limitation, "an anode electrode foil" is confusing. Is this the anode electrode foil as claimed in claim 1?

Claim 3, line 2, the limitation, "an anode leading means" is confusing. Is this the anode tab as claimed in claim 1?

Claim 3, line 3, the limitation, "a cathode electrode foil" is confusing. Is this the cathode electrode foil as claimed in claim 1?

Claim 3, line 2, the limitation, "an cathode leading means" is confusing. Is this the cathode tab as claimed in claim 1?

Claim 4, lines 2 and 5-6, the limitation, "the electrolyte solution contains tetrafluoride salt" has already been claimed in claim 1. It is suggested to applicant to delete this limitation from the claim.

Claim 4 recites the limitation "the electrode foil" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

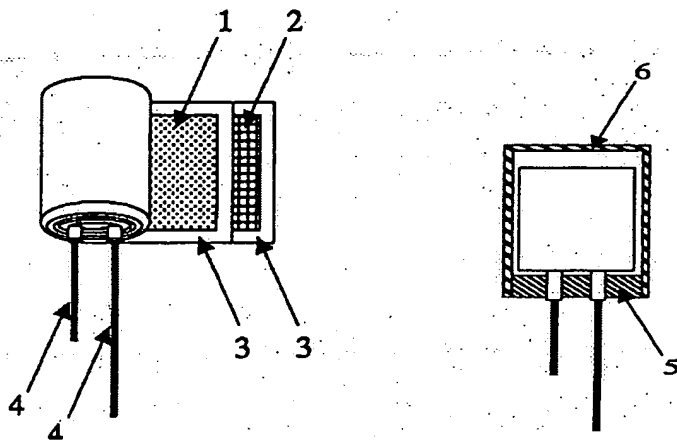
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-2, are rejected under 35 U.S.C. 103(a) as being obvious over Takeda et al. (US 2004/0095708) in view of JP 11-067600 ('600).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an

invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).



Regarding claim 1, Takeda et al. disclose in fig. 1-2, an electrolytic capacitor comprising a capacitor element impregnated with an electrolytic solution, wherein the capacitor element contains a wound anode electrode foil (1) and a wound cathode electrode foil (2), which are connected to an anode lead (4 – rod member showing) and a cathode lead (4 – rod member showing) respectively, with an intervening separator (3), and wherein the capacitor element is housed in a cylindrical outer case with a

Art Unit: 2831

bottom, and an open end of the outer case is sealed by a sealing member (5); wherein the electrolytic solution contains an aluminum tetrafluoride salt (aluminum tetrafluoride).

Takeda et al. disclose the claimed invention except for the anode and cathode leads comprise anode and cathode tabs.

'600 illustrate anode and cathode leads comprising anode and cathode tabs (see fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the anode and cathode leads with anode and cathode tabs as taught '600, since such a modification would provide the leads with increase surface area for attachment to the anode and cathode foils.

The modified Takeda et al. disclose a foil that shows noble metal electrode potential at least in the electrolyte solution than an electrode potential of the cathode tab is used as the cathode electrode foil (inherent feature – same elements – inherent feature).

Regarding claim 2, Takeda et al. disclose a titanium nitride is formed on an aluminum cathode foil. Takeda et al. disclose the claimed invention except for the coating has a thickness of 0.02 – 0.1 μm .

'600 teaches an improved aluminum cathode foil having a titanium nitride coated on the surface thereof.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form laminate a cathode coating comprising titanium nitride

having a thickness of 0.04 – 0.5 μm , since such a modification would provide a cathode having improved mechanical, chemical, and electrical properties.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (US 2004/0095708) and JP 11-067600 ('600) as applied to claim 1 above, and further in view of JP 2001102265 ('265).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Takeda et al. disclose the claimed invention except for the cathode lead is formed of aluminum of more than 99.9 % purity.

'265 teaches the use of an improved cathode lead formed of an aluminum material of more than 99.9 % purity (see abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the capacitor of Takeda et al. using the improved cathode lead means of '265, since such a modification would improve the overall impedance, and the stability of breakdown voltage in the system.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (US 2004/0095708) and JP 11-067600 ('600) as applied to claim 1 above, and further in view of Arora et al. (RE 31,743).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Takeda et al. disclose the claimed invention except for the anode and cathode foils are subjected to a phosphate treatment.

Arora et al. teach the use of a phosphate treatment to improve foils for electrolytic capacitors.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to subject the anode and cathode foils with a phosphate treatment, since such a modification would etch the anode and cathode foils with little change in mechanical strength.

6. Claims 5, and 6, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (US 2004/0095708) and JP 11-067600 ('600) as applied to claims 1 & 2 above, and further in view of Nitta et al. (US 6,262,879).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and

reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claims 5, & 6, Takeda et al. disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer, wherein the butyl rubber polymer comprises a copolymer of isobutylene, isoprene, and divinylbenzene.

Nitta et al. teach the use of an improve seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding a peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda et al., since such a modification would provide a sealing member having a more reliable sealing property.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (US 2004/0095708), JP 11-067600 ('600), and JP 2001102265 ('265), as applied to claim 3 above, and further in view of Nitta et al. (US 6,262,879).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Takeda et al. disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by that peroxide is added as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene is used as the sealing member.

Nitta et al. teach the use of an improve seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda

et al., since such a modification would provide a sealing member having a more reliable sealing property.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (US 2004/0095708), JP 2001102265 ('265), and Arora et al. (RE 31,743) as applied to claim 4 above, and further in view of Nitta et al. (US 6,262,879).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Takeda et al. disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by that peroxide is added as a cross-linking agent

to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene is used as the sealing member.

Nitta et al. teach the use of an improve seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda et al., since such a modification would provide a sealing member having a more reliable sealing property.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 and 2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600).

Regarding claim 1, '173 discloses an electrolytic solution comprising tetrafluoride salt (see claim 29).

'173 discloses the claimed invention except for the electrolytic capacitor is obtained by impregnating a capacitor element with an electrolytic solution, wherein the capacitor element is formed by winding an anode electrode foil and a cathode electrode foil, which are connected to an anode lead and a cathode lead respectively, separated by a separator, a housing comprising a cylindrical outer case with a bottom and an open end; the open end is sealed by a sealing member, and the anode and cathode leads comprise anode and cathode tabs.

'600 teaches that it is known in the capacitor art to form an electrolytic capacitor obtained by impregnating a capacitor element with an electrolytic solution, wherein the capacitor element is formed by winding an anode electrode foil (2) and a cathode electrode foil (1), which are connected to an anode lead and a cathode lead respectively, separated by a separator, a housing comprising a cylindrical outer case with a bottom and an open end; the open end is sealed by a sealing member, and the anode and cathode leads comprise anode and cathode tabs.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the electrolyte in the capacitor of '600, since such a modification would provide the electrolyte with a system to operate in and provide a

system with an electrolyte having high electrolytic conductivity, and excellent thermal stability.

The modified '803 disclose a foil that shows noble metal electrode potential at least in the electrolyte solution than an electrode potential of the cathode tab is used as the cathode electrode foil (inherent feature – same elements – inherent feature).

Regarding claim 2, '600 disclose a titanium nitride is formed on an aluminum cathode foil and the coating has a thickness of 0.02 – 0.1 μm .

11. Claim 3 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600) and JP 2001-102265.

Regarding claim 3, '173 & '600 disclose the claimed invention except for the cathode lead formed of an aluminum material of more than 99.9 % pure.

'265 teaches a known electrolytic capacitor obtained by winding an anode electrode foil provided with an anode leading means, and a cathode electrode foil which is made of aluminum subjected to a chemical treatment, provided with a cathode leading means and a separator means formed between the anode and cathode, the cathode lead formed of an aluminum material of more than 99.9 % pure, and the capacitor element is placed in an outer case.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the capacitor of '173 using the improved cathode lead

means of '265, since such a modification would improve the overall impedance, stability of breakdown voltage characteristic of the system.

12. Claim 4 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600) and Arora et al. (RE 31,743).

'173 and '600 disclose the claimed invention except for the anode and cathode foils are subjected to a phosphate treatment.

Arora et al. teach the use of a phosphate treatment to improve foils for electrolytic capacitors.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to subject the anode and cathode foils with a phosphate treatment, since such a modification would etch the anode and cathode foils with little change in mechanical strength.

13. Claims 5-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600) and Nitta et al. (US 6,262,879).

Regarding claims 5, & 6, '173 and '600 disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer, wherein the butyl rubber polymer comprises a copolymer of isobutylene, isoprene, and divinylbenzene.

Nitta et al. teach the use of an improve seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding a peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda et al., since such a modification would provide a sealing member having a more reliable sealing property.

14. Claim 7 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600), JP 2001-102265, and Nitta et al. (US 6,262,879).

'173, '600, '265 disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer, wherein the butyl rubber polymer comprises a copolymer of isobutylene, isoprene, and divinylbenzene.

Nitta et al. teach the use of an improve seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding a peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda

et al., since such a modification would provide a sealing member having a more reliable sealing property.

15. Claim 8 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 29 of U.S. Patent No. 7,072,173 in view of JP 11-067600 ('600), Arora et al. (RE 31,743), and Nitta et al. (US 6,262,879).

'173, '600, and Arora et al. disclose the claimed invention except for a partial cross-linking peroxide butyl rubber which is formed by adding peroxide as a cross-linking agent to a butyl rubber polymer, wherein the butyl rubber polymer comprises a copolymer of isobutylene, isoprene, and divinylbenzene.

Nitta et al. teach the use of an improved seal comprising a partial cross-linking peroxide butyl rubber which is formed by adding a peroxide as a cross-linking agent to a butyl rubber polymer comprising a copolymer of isobutylene, isoprene, and divinylbenzene.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made used the sealing material of Nitta et al. in the capacitor of Takeda et al., since such a modification would provide a sealing member having a more reliable sealing property.

Response to Arguments

16. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

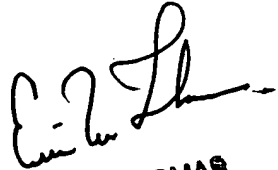
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ewt


ERIC W. THOMAS
PRIMARY EXAMINER